

Remarks

This Application has been carefully reviewed in light of the final Office Action mailed October 30, 2003. Since Applicants believe all pending claims are clearly allowable over the cited prior art without amendment, no amendments have been made. However, Applicants respectfully provide the following additional remarks. Applicants respectfully request reconsideration and allowance of all pending claims.

The Claims are Allowable over *Henson* in view of *Rhythm*

The Examiner continues the rejection of Claims 1-4 and 6-43 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent 6,167,383 to Henson ("*Henson*") in view of a series of pages from i2 Technologies' website dated 5/26/98 ("*Rhythm*"). A rejection under 35 U.S.C. § 103(a) is proper only if "the differences between the subject matter sought to be patented and the prior art are such that the subject matter *as a whole* would have been obvious at the time the invention was made to a person having ordinary skill in the art." 35 U.S.C. § 103(a) (emphasis added). As explained below, Applicants respectfully submit that the Examiner has not met this burden and that the Examiner's obviousness rejections are therefore improper and should be withdrawn.

1. Independent Claims 1, 10, 20, 28, and 36

a. Even when combined, the references fail to disclose, teach, or suggest limitations recited in the claims

The Examiner again acknowledges that the primary reference *Henson* does not disclose the "dynamically applied optimization features" recited in Applicants' claims. (Final Office Action, Page 2) Not only does *Henson* "not specifically mention some of" the recited dynamically applied optimization features as the Examiner states, but as demonstrated in Applicants' previous Response, *Henson* fails to disclose, teach, or suggest in any manner whatsoever the recited dynamically applied optimization features.

Furthermore, also as demonstrated in Applicants' previous Response, the secondary reference *Rhythm* merely mentions optimization in the context of supply chain management activities such as planning and scheduling. (See, e.g., Pages 1 ("*solutions*"), 6-7 ("*advanced scheduling*"), 15 ("*distribution planning*"), 19-20 ("*manufacturing planning*")) The only

portion of the *Rhythm* reference even marginally related to configuring a product, entitled "order promising," is entirely devoid of any mention of optimization. (See Page 3 ("order promising")) The Examiner's summary conclusion that the order promising solution as disclosed in the *Rhythm* reference "allows companies to model and implement their business rules using a wide range of constraint[s] to achieve optimization" lacks any basis in the *Rhythm* reference and, in any case, clearly fails to make up for the deficiencies of the primary reference *Henson*.

As made clear in Applicants' claims, it is not any particular optimization functions that Applicants seek to patent, but instead the dynamic application of an optimization function, with respect to each item in each of a series of selection options sets during a product configuration session, according to data received from an available-to-promise engine during the product configuration session, to identify an item of each selection option set as a default selection that is optimal among the one or more items of the selection option set with respect to the dynamically applied optimization function. As explained in Applicants' previous Response, even if it would have been technologically possible at the time of Applicants' invention to combine *Rhythm* with *Henson*, which Applicants dispute as discussed below, and even if there was the required suggestion or motivation to do so, which Applicants also dispute as discussed below, the proposed *Henson-Rhythm* combination would still provide no disclosure, teaching, or suggestion of at least the following limitations, in combination, as recited in independent Claim 1 (and similarly in the other independent claims):

- *during a product configuration session*
- *for each of a series of selection option sets*
- *dynamically applying an optimization function with respect to each item in the selection option set*
- *according to data received from an available-to-promise engine during the product configuration session*
- *to identify an item of the selection option set as a default selection*
- *the default selection being optimal among the one or more items of the selection option set with respect to the dynamically applied optimization function*

In the Examiner's "Response to Arguments," the Examiner states that the third of the claim limitations set forth above, "*dynamically applying an optimization function with*

respect to each item in the selection option set," is disclosed in the *Rhythm* reference at Page 7. (Final Office Action, Page 3) However, the only mentions of optimization, optimizer, optimal, or the like on Page 7 of the *Rhythm* reference, in a section entitled "*advanced scheduling*," have nothing whatsoever to do with items in a selection option set presented to a user during a product configuration session:

- "RHYTHM uses an automatic schedule builder and global optimizer, based on genetic algorithms, to quickly generate high-quality schedules from complex data. Genetic algorithm technology allows RHYTHM to solve complex scheduling scenarios with many different constraints that cannot be solved with traditional optimizers." (Page 7, ¶ 1)
- "RHYTHM employs an extremely fast constraint-computation engine, which supports global optimization, interactive scheduling, fast rescheduling, and what-if planning." (Page 7, ¶ 2)

Other portions of the "*advanced scheduling*" section of the *Rhythm* reference, and all other sections of the *Rhythm* reference in which optimization or the like is mentioned, are similarly devoid of any relationship to items in a selection option set presented to a user during a product configuration session. The *Rhythm* reference is plainly insufficient to meet the third of the limitations set forth above, "*dynamically applying an optimization function with respect to each item in the selection option set*," which the Examiner acknowledges is also absent from *Henson*. Independent Claim 1 is allowable for at least this reason.

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Also in the Examiner's "Response to Arguments," the Examiner states that the fourth of the claim limitations set forth above, dynamically applying an optimization function with respect to each item in the selection option set "*according to data received from an available-to-promise engine during the configuration session*," is disclosed in the *Rhythm* reference at Pages 3-4. (Final Office Action, Page 3) The *Rhythm* reference merely discloses the use of available-to-promise functionality in a section entitled "*order promising*" that contains no disclosure, teaching, or suggestion whatsoever of optimization, optimizer, optimal, or the like. This disclosure in the *Rhythm* reference is wholly insufficient to meet the fourth of the limitations set forth above, dynamically applying an optimization function with respect to each item in the selection option set "*according to data received from an available-to-promise engine during the configuration session*," which the Examiner acknowledges is also absent from *Henson*. Independent Claim 1 is also allowable for at least this reason.

Also in the Examiner's "Response to Arguments," the Examiner states that the fifth of the claim limitations set forth above, dynamically applying an optimization function with respect to each item in the selection option set *"to identify an item of the selection option set as a default selection,"* is disclosed in the *Rhythm* reference at Page 19. (Final Office Action, Page 3) However, the only mentions of optimization, optimizer, optimal, or the like on Page 19 of the *Rhythm* reference, in a section entitled *"manufacturing planning,"* have nothing whatsoever to do with items in a selection option set presented to a user during a product configuration session:

- "Infinite capacity planning is an important step in formulating an optimal, finite capacity plan." (Page 19, ¶ 2)
- "However the user also has the choice of using RHYTHM's constraint-based, load-balancing algorithms to automatically create an optimal finite capacity constrained plan." (Page 19, ¶ 2)

Other portions of the *"manufacturing planning"* section of the *Rhythm* reference, and all other sections of the *Rhythm* reference in which optimization or the like is mentioned, are similarly devoid of any relationship to items in a selection option set presented to a user during a product configuration session. The *Rhythm* reference is plainly insufficient to meet the fifth of the limitations set forth above, dynamically applying an optimization function with respect to each item in the selection option set *"to identify an item of the selection option set as a default selection,"* which the Examiner acknowledges is also absent from *Henson*. Independent Claim 1 is also allowable for at least this reason.

Also in the Examiner's "Response to Arguments," the Examiner states that the sixth of the claim limitations set forth above, dynamically applying an optimization function with respect to each item in the selection option set to identify an item of the selection option set as a default selection, *"the default selection being optimal among the one or more items of the selection option set with respect to the dynamically applied optimization function,"* is disclosed in the *Rhythm* reference at Pages 7, 18, and 19. (Final Office Action, Page 4) However, as shown above, the only mentions of optimization, optimizer, optimal, or the like on Pages 7 and 19 of the *Rhythm* reference have nothing whatsoever to do with items in a selection option set presented to a user during a product configuration session. Similarly, the only mentions of optimization or the like on Page 18 of the *Rhythm* reference, in the section

entitled "*manufacturing planning*," have nothing whatsoever to do with items in a selection option set presented to a user during a product configuration session:

- "i2 Technologies' solution for manufacturing planning takes a global approach to intelligently optimize the performance of a manufacturing operation." (Page 18, ¶ 1)
- "RHYTHM manages complex manufacturing operations that involve large numbers of resources and operational steps in real time, as well as solves common planning problems found in factories, such as managing complex bills of material, alternate routings, and optimizing machine setup sequences." (Page 18, ¶ 2)
- "The RHYTHM Manufacturing Planning solution can be used in conjunction with Advanced Scheduling to determine the optimal sequence of operations at each resource." (Page 18, ¶ 2)

As discussed above, other portions of the "*advanced scheduling*" and "*manufacturing planning*" sections of the *Rhythm* reference, and all other sections of the *Rhythm* reference in which optimization is mentioned, are similarly devoid of any relationship to items in a selection option set presented to a user during a product configuration session. The *Rhythm* reference is plainly insufficient to meet the sixth of the limitations set forth above, dynamically applying an optimization function with respect to each item in the selection option set to identify an item of the selection option set as a default selection, "*the default selection being optimal among the one or more items of the selection option set with respect to the dynamically applied optimization function*," which the Examiner acknowledges is also absent from *Henson*. Independent Claim 1 is also allowable for at least this reason.

Examples of the dynamic nature of the optimization function recited in independent Claim 1 are provided in dependent Claims 7-9, which recite as particular examples defining the optimization function "during the configuration session" (Claim 7), "in response to an identification of the user during the configuration session" (Claim 8), and "in response to a product selection decision made by the user during the configuration session" (Claim 9). In the Examiner's "Response to Arguments," the Examiner refers to alleged disclosure of these limitations in the *Henson* and *Rhythm* references. (Final Office Action, Page 4) However, for reasons similar to those discussed above with respect to the third, fifth, and sixth limitations set forth above, these references are plainly insufficient.

b. The proposed combination of references is improper

Applicants reiterate the remarks provided in the previous Response explaining why the Examiner's proposed combination of the *Rhythm* reference with *Henson* is improper under the M.P.E.P. and governing Federal Circuit case law. Even if it would have been technologically possible to in some way combine the teachings of *Henson* and the *Rhythm* reference, which Applicants dispute, and even if the combined teachings of *Henson* and the *Rhythm* reference met the limitations recited in Applicants' independent claims, which Applicants also dispute as discussed above, the combination is improper under the M.P.E.P. and the governing Federal Circuit case law unless there is the required teaching, suggestion, or motivation in the prior art for the combination.

The M.P.E.P. sets forth the strict legal standard for finding obviousness based on a combination of references. According to the M.P.E.P., "Obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either explicitly or implicitly in the references themselves or in the knowledge [that was] generally available to one of ordinary skill in the art" at the time of the invention. M.P.E.P. 2143.01. The "fact that references can be combined or modified does not render the resultant combination [or modification] obvious unless the prior art also suggests the desirability of the combination" or modification. *Id.* (emphasis in original).

The governing Federal Circuit case law makes this strict legal standard even more clear.¹ According to the Federal Circuit, "a showing of a suggestion, teaching, or motivation to combine . . . prior art references is an essential component of an obviousness holding." *In re Sang-Su Lee*, 277 F.3d 1338, 1343 (Fed. Cir. 2002) (quoting *Brown & Williamson Tobacco Corp. v. Philip Morris Inc.*, 229 F.3d 1120, 1124-25 (Fed. Cir. 2000)). "Evidence of a suggestion, teaching, or motivation . . . may flow from the prior art references themselves, the knowledge of one of ordinary skill in the art, or, in some cases, the nature of the problem to be solved." *In re Dembiczak*, 175 F.3d 994, 999 (Fed. Cir. 1999). However, the "range of sources available . . . does not diminish the requirement for actual evidence." *Id.* In *In re*

¹ Note M.P.E.P. 2145 X.C. ("The Federal Circuit has produced a number of decisions overturning obviousness rejections due to a lack of suggestion in the prior art of the desirability of combining references.").

Dembiczak, the Federal Circuit reversed a finding of obviousness by the Board of Patent Appeals and Interferences, explaining that proper evidence of a teaching, suggestion, or motivation to combine is essential to avoid impermissible hindsight reconstruction of an applicant's invention:

Our case law makes clear that the best defense against the subtle but powerful attraction of hind-sight obviousness analysis is *rigorous application of the requirement for a showing of the teaching or motivation to combine prior art references*. Combining prior art references without evidence of such a suggestion, teaching, or motivation simply takes the inventor's disclosure as a blueprint for piecing together the prior art to defeat patentability—the essence of hindsight.

175 F.3d at 999 (quoting *W.L. Gore & Assoc., Inv. v. Garlock, Inc.*, 721 F.2d 1540, 1553 (Fed. Cir. 1983)) (emphasis added) (citations omitted).² Even a determination that it would have been obvious to one of ordinary skill in the art at the time of the invention to try the proposed combination is not sufficient to establish obviousness. See *In re Fine*, 837 F.2d 1071, 1075 (Fed. Cir. 1988).

The Examiner's summary conclusion at Page 3 of the final Office Action that it would have been obvious to one of ordinary skill in the art at the time of Applicants' invention to include optimization capabilities disclosed in the *Rhythm* reference in the system disclosed in *Henson*, "because this would increase the likelihood of promised delivery dates being met and increase customer satisfaction," is not supported by any teaching, suggestion, or motivation in *Henson*, the *Rhythm* reference, or knowledge generally available to those of ordinary skill in the art at the time of Applicants' invention. As an example, the Examiner argues that the system disclosed in *Henson* "is improved" when the capabilities disclosed in the *Rhythm* reference "are added to present an optimized product configuration," citing to auto-resolution methods for resolving distribution planning problems as disclosed at Page 16 of the *Rhythm* reference. (Final Office Action, Page 6) The mention of auto-resolution methods for resolving distribution planning problems fails to teach, suggest, or motivate in any manner whatsoever combining the teachings of *Henson* and the *Rhythm* reference. Since

² See also *In Re Jones*, 958 F.2d 347, 351 (Fed. Cir. 1992) ("Conspicuously missing from this record is any evidence, other than the PTO's speculation (if that can be called evidence) that one of ordinary skill in the herbicidal art would have been motivated to make the modification of the prior art salts necessary to arrive at" the claimed invention.).

the Examiner has not provided a sufficient teaching, suggestion, or motivation in the prior art, the Examiner's conclusion of obviousness is improper under the M.P.E.P. and governing Federal Circuit case law.

c. The Examiner has used improper hindsight reconstruction

In the Examiner's "Response to Arguments," the Examiner argues that his hindsight reconstruction of Applicants' invention is proper "so long as it takes into account only knowledge that was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure," citing a 1971 CCPA case. (Final Office Action, Pages 5) However, Applicants respectfully submit that the governing Federal Circuit case law clearly prohibits the hindsight reconstruction the Examiner has employed in making these rejections. According to the Federal Circuit:

Our case law makes clear that the best defense against the subtle but powerful attraction of hind-sight obviousness analysis is rigorous application of the requirement for a showing of the teaching or motivation to combine prior art references. Combining prior art references without evidence of such a suggestion, teaching, or motivation simply takes the inventor's disclosure as a blueprint for piecing together the prior art to defeat patentability—the essence of hindsight.

In re Dembiczak at 998. 35 U.S.C. § 103(a) forbids "entry into the tempting but forbidden zone of hindsight when analyzing the patentability of claims pursuant to that section." *In re Dembiczak*, 175 F.3d at 998-99; *see also In re Fine*, 837 F.2d at 1075 ("One cannot use hindsight reconstruction to pick and choose among isolated disclosures in the prior art to deprecate the claimed invention."). Applicants respectfully submit that the Examiner has employed the type of hindsight reconstruction that has been explicitly forbidden under the governing Federal Circuit case law.

For at least the reasons above, Applicants respectfully request reconsideration and allowance of independent Claims 1, 10, 20, 28, and 36 and all claims that depend on these claims.

2. Further as to Independent Claims 10 and 20

Independent Claim 10 further recites "*for each selection option set, before presenting the selection option set to the user, determining which of the items of the selection option set are actually available to the user in accordance with a user-specified date constraint and presenting only those items of the selection option set which are actually available to the user in accordance with the user-specified date constraint.*" Similar limitations are recited in independent Claim 20 and dependent Claims 2, 31, and 39. As discussed in Applicants' previous Responses, *Henson* discloses providing to the user a warning indicator to indicate an option which, if already selected or selected in the future by the user, would represent an invalid configuration or would adversely impact a shipment or delivery date of the configured product. Using the system disclosed in *Henson*, as clearly illustrated in Figure 4 of *Henson*, the user is presented with all options and remains free to at least initially select any of these options. Numerous examples from *Henson* demonstrating this distinction were provided in Applicants' previous Responses. The *Rhythm* reference fails to make up for the deficiencies of *Henson* in this regard. As an example, the Examiner argues that the system disclosed in *Henson* "is improved" when the capabilities disclosed in the *Rhythm* reference "are added to present an optimized product configuration," citing to auto-resolution methods for resolving distribution planning problems as disclosed at Page 16 of the *Rhythm* reference. (Final Office Action, Page 6) However, auto-resolution methods for resolving distribution planning problems are not related in any manner whatsoever to the deficiencies of *Henson* discussed in this paragraph. Applicants also respectfully reiterate their remarks in previous Responses concerning the obviousness rejections of independent Claims 10 and 20 and dependent Claims 2, 31, and 39.

For at least these reasons, Applicants respectfully request reconsideration and allowance of independent Claims 10 and 20, all claims that depend on these claims, and dependent Claims 2, 31, and 39.

Conclusion

Applicants have made an earnest attempt to place this Application in condition for allowance. For at least the foregoing reasons, Applicants respectfully request full allowance of all pending claims.

If the Examiner believes a telephone conference would advance prosecution of this case in any way, the Examiner is invited to contact Christopher W. Kennerly, Attorney for Applicants, at the Examiner's convenience at (214) 953-6812.

Although Applicants believe no fees are due, the Commissioner is hereby authorized to charge any fees or credit any overpayments to Deposit Account No. 02-0384 of Baker Botts L.L.P.

Respectfully submitted,

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